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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,579	08/25/2003	Toshiyuki Takabayashi	03500/HG	4092
1933	7590	10/19/2005	EXAMINER	
FRISHAUF, HOLTZ, GOODMAN & CHICK, PC 220 5TH AVE FL 16 NEW YORK, NY 10001-7708			BERMAN, SUSAN W	
			ART UNIT	PAPER NUMBER

1711

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/648,579	Applicant(s) TAKABAYASHI, TOSHIYUKI	
	Examiner Susan W. Berman	Art Unit 1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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***Election/Restrictions***

Applicant's election without traverse of Invention Group I, Claims 1-7, drawn to a composition comprising a photoacid generator and cationically polymerizable compounds, in the response filed 08/03/2005 is acknowledged. Newly submitted claim 12 is grouped with the elected invention. Claims 8-11, drawn to a method for ink jet printing and an apparatus for ink jet recording, have been withdrawn from prosecution.

***Response to Amendment***

The rejection of claims 1-7 under 35 U.S.C. 112, first paragraph, is withdrawn. The claims now recite a photopolymerizable monomer as component of the composition.

The rejection of claims 1-7 under 35 U.S.C. 112, second paragraph, set forth in the first Office Action is withdrawn.

***Response to Arguments***

Applicant's arguments filed 08/03/05 (first filed 06-09-2005) have been fully considered but they are not persuasive for the following reasons.

Applicant argues that the distinguishing feature of the instantly claimed compositions is the maximum bond distance of 0.1688-0.1750 between S-C in the photoacid generators set forth. It is noted that claim 1 sets forth "0.1686-0.1750 0.1688-0.1750 nm".

The Declaration under 37 CFR 1.132 of Toshiyuki Takabayashi has been considered but is unpersuasive with respect to the limitations set forth in the instant claims for the following reasons. Check whether examples used are closest prior art. The data presented in the Declaration shows that the samples prepared according to Ohkawa et al exhibit significantly different properties, i.e. character quality and color mixing, than samples prepared according to the invention. However, claim 1, as written, includes

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the sulfonium salts of Ohkawa et al wherein the bond distance is 0.1686. Furthermore, there is no evidence to show that sulfonium compounds wherein the bond distance is 0.1688 result in the significantly different properties relied upon for patentability. Applicant has provided evidence in the Declaration to support significantly different properties obtained wherein the sulfonium salt in the composition has a bond distance from 0.1695-1750. Furthermore, there is no evidence of record that the properties relied upon are obtained in compositions comprising photopolymerizable monomers other than the mixture of oxetane and epoxy compounds employed in the examples. Thus, the data submitted to show unexpected results fails to support the scope of the claim language.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In the claim 1 paragraph setting forth maximum bond distance, applicant recites bond distances between adjacent C and each of S<sub>1</sub>, S<sub>3</sub>, S<sub>4</sub>, and S<sub>5</sub> and then sets forth "0.1686-0.1750 0.1688-0.1750 nm". It is not clear whether applicant intends to set forth one range or two ranges. If two ranges are intended to be set forth, it is not clear from the term "respectively", which bonds and which ranges go together.

***Claim Rejections - 35 USC § 102/35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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Claims 1-3, 7 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohkawa et al (6,368,769). Ohkawa et al disclose compositions comprising an aromatic sulfonium salt of formula 1 defined in column 4, lines 1-18, wherein R<sup>1</sup> is phenylene, thus providing a sulfonium salt having at least one substituent other than H on a phenyl group. Sulfonium salts corresponding to formula II and to formula III in the instant claims are taught. See synthesis examples 1-6. Polymerizable epoxy and oxetane and vinyl ether compounds are taught in column 8, lines 15-24. Pigment is taught in column 11, line 29. Applicant's claims include the bond lengths between 0.1686-0.1750 of the compounds disclosed by Ohkawa et al.

Claims 1-5, 7 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohkawa et al (6,368,769). Ohkawa et al disclose compositions comprising an aromatic sulfonium salt of formula 1 defined in column 4, lines 1-18, wherein R<sup>1</sup> is phenylene, thus providing a sulfonium salt having at least one substituent other than H on a phenyl group. Sulfonium salts corresponding to formula II and to formula III in the instant claims are taught. See synthesis examples 1-6. Polymerizable epoxy and oxetane and vinyl ether compounds are taught in column 8, lines 15-24. Pigment is taught in column 11, line 29. Ohkawa et al do not teach requiring a bond distances between S and C corresponding to the bond distance between S<sub>1</sub> and the adjacent C atom in the instantly claimed formulae.

Ohkawa et al teach mono-oxetane compounds and bis-oxetane compounds and that the compounds can be used independently or in combination (column 9, line 38, to column 10, line 28). Oxetane compounds are said to effect flexible properties for the moldings disclosed. Ohkawa et al also teach compositions comprising an oxetane compound in an amount of 30% or more and epoxy resin in an amount of 70% or less (column 11, lines 3-10). Ohkawa et al do not specifically teach compositions comprising a mono-oxetane compounds and bis-oxetane compound or compositions comprising an oxetane compound and an epoxy compound in the weight percents recited in claim 5.

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It would have been obvious to one skilled in the art at the time of the invention to select sulfonium compounds from those taught by Ohkawa et al inherently having the bond distance between S and adjacent carbon set forth in the instant claims. With respect to claim 4, It would have been obvious to one skilled in the art at the time of the invention to provide a composition comprising 60-95 weight percent oxetane compound and 5-40 weight percent epoxy compound from the teaching of Ohkawa et al to use more than 30% oxetane compound in combination with an epoxy compound. With respect to claim 5, It would have been obvious to one skilled in the art at the time of the invention employ a combination of oxetane compounds having one oxetane ring and having two or more oxetane rings, as suggested by Ohkawa et al. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of successfully providing a composition for stereolithography taking advantage of the flexibility properties of the oxetanes and the fast curing properties of the epoxies taught by Ohkawa et al.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-7 and 12 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of copending Application No. 10/746170. Although the conflicting claims are not identical, they are not patentably distinct from each other for the

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following reasons. The claims of SN '170 set forth compositions comprising a photoacid generator and an oxetane compound alone or in mixtures with different oxetane compounds, an epoxy compound and/or a vinyl ether compound. The photoacid generator taken in view of the sulfonium initiators disclosed in SN '170 and Initiator 1 in SN '170, which corresponds to formula II in the instant claims, suggests the instantly claimed compositions wherein the photoacid generator is formula II. It would have been obvious to one skilled in the art at the time of the invention to select a sulfonium salt of formula II as the photoacid generator in the claims of SN '170 because a sulfonium salt photoacid generator of formula II is disclosed and used in the examples of SN '170.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

### *Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

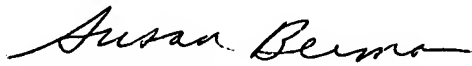
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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
10/16/2005

  
Susan W Berman  
Primary Examiner  
Art Unit 1711